

ABSTRACT

Disclosed is a method for preparing a clay-dispersed polymer nanocomposite. In this method, a polymer, which carries oxygen atoms within the repeating units of its backbone and is thermodynamically compatible with a binder resin, is used as a matrix resin. Useful is poly( $\epsilon$ -caprolactone) owing to its thermodynamic compatibility with poly(styrene-co-acrylonitrile) copolymers, poly(acrylonitrile-co-butadiene-co-styrene) copolymers, and poly(vinylchloride) resins. Poly( $\epsilon$ -caprolactone) resins aid the binder resins to penetrate into silicate layers so that the silicate of the organophilic clay was completely delaminated to silicate lamellas.